CLAIMS

1. A microelectronic device used to produce light radiation, and which includes:

- first electroluminescent means designed to produce first radiation of a certain luminance,

- first control means (130) designed to control the first electroluminescent means by means of a first current (id1) with a level belonging to a first range of levels,

- second electroluminescent means designed to produce second radiation of another luminance,

- second control means (140) designed to control the second electroluminescent means, by means of a second current (id2) with a level belonging to a second range of levels different from the first,

with the light radiation having a total luminance which is a combination of said certain luminance and of said other luminance.

2. A device according to claim 1, with at least several intensities of said first range of levels to which the first current belongs (id1) being lower than the intensities of said second range of levels to which the second current belongs (id2).

3. A device according to one of claims 1 or 2, with the first and second control means each being equipped with switching means.

4. A device according to claim 3, with the switching means of the first control means (130) and of

the second control means (140) being controlled by a given signal (vsel).

5. A device according to one of claims 3 or 4, with the switching means of the first control means (130) having at least one transistor switch (131).

6. A device according to one of claims 3 to 5, with the switching means of the second control means (140) having at least one other transistor switch (141).

7. A device according to one of claims 1 to 6, with the first and second control means (130,140) each having current modulating means.

8. A device according to claim 7, with the current modulating means of the first control means (130) including at least one current modulating transistor (132).

9. A device according to claim 8, with the means for modulating the second control means (140) including at least one other current modulating transistor (142).

10. A device according to claim 9, in which the first control means (130) include a current-modulating transistor (132) equipped with a channel of length L_1 and width W_1, the second control means (140) include another current-modulating transistor (142) equipped with a channel of length L_2 and width W_2, with the ratio W_2/L_2 being greater than the ratio.

11. A device according to one of claims 7 to 10, with the current modulating means of the first control means (130) being controlled by a control signal (vdat1), and the current modulating means of the second control means (140) being controlled by another control signal (vdat2).

12. A device according to claim 11, with the control signal (vdat1) belonging to a certain range of voltages, and the other control signal (vdat2) belonging to another range of voltages that is different from said certain range of voltages.

13. A device according to claim 11 or 12, with the first control means also having at least one first capacitor (133) designed to retain the control signal (vdat1).

14. A device according to claim (13), with the second control means also having at least one second capacitor (143) designed to retain the other control signal (vdat2).

15. A device according to one of claims 1 to 14, with the first and second electroluminescent means each including an organic photodiode (110,120).

16. A device according to one of claims 1 to 15, in which the first electroluminescent means include a first photodiode, the second electroluminescent means include a second photodiode, with the first photodiode and the second photodiode having different emitting areas.

17. A device according to one of claims 1 to 16, with the first electroluminescent means and the second electroluminescent means being designed to function alternately or simultaneously.

18. A display or screen pixel that includes a microelectronic device according to one of claims 1 to 17.